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From: Division/Bureau: Dept. of Reviewer: Patty Wag Date: 819196	Transportation, Environment	al Management Office

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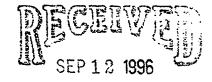
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PROJECT DESCRIPTION Department of the Army - Draft F Storm Effects Study, Region III -	Feasibility Report - Draft Environmental Palm Beach, Broward and Dade Count	Impact Statement for the Coast of Florida Erosion and ies, Florida.
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IF YOU HAVE ANY QUESTIONS REGARDING THE ATTACHED PROJECT, PLEASE CONTACT THE STATE CLEARINGHOUSE AT (904) 922-5438 OR SUNCOM 272-5438.

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September 4, 1996



State of Florida Clearinghouse

Ms. Keri Akers Clearinghouse Coordinator Florida State Clearinghouse Department of Community Affairs 2555 Shumard Oak Boulevard Tallahassee, FL 32399-2100

Subject: Intergovernmental Coordination Review (ICR) Responses

Dear Ms. Akers:

Please find enclosed staff's comments on SAI #: FL9608020623C, relating to the Department of Army Draft Feasibility Report - Draft Environmental Impact Statement for the Coast of Florida Erosion and Storm Effects Study, Region III - Palm Beach, Broward and Dade Counties. Comments are contingent upon Council's review at the regular Council meeting on September 20, 1996. Additional comments from local governments are also attached.

Sincerely.

Michael J. Busha, AICP

Executive Director

Attachments



TCRPC NUMBER:

96-PB-08-08

APPLICANT:

Department of the Army Corps of Engineers

PROJECT DESCRIPTION:

Draft Feasibility Report - Draft Environmental Impact State for the Coast of Florida Erosion and Storm Effects study, Region III: Palm Beach, Broward and Dade

Counties

Introduction

This report summarizes a cooperative cost shared Feasibility Study on the beach erosion and storm damage problems of the lower southeast coast of Florida shoreline which includes Palm Beach County.

Analysis '

Florida's shorelines are being investigated on a regional, instead of the conventional project by project basis. The study is based on new computer technology that has resulted over the last decade. Florida is divided into five coastal regions based on distinct differences between the areas, such as wave climate, coastal processes, and beach characteristics. Region III includes Dade County from the southern end of Key Biscayne northward to Jupiter Inlet in Northern Palm Beach County. This region has been identified as the first region to study since it is the most densely populated coastal region in Florida.

The study summarizes the preconstruction studies conducted in Region III relative to beach erosion control and storm damage prevention. Based on these studies storm damage may impact 21.8 miles of Atlantic shoreline in Palm Beach County. The amount of shorefront development threatened by storm in Palm Beach County is estimated to be \$2,150,022,525. A rise in sea level could raise the cost estimates due to increase in shoreline recession and storm damages. Palm Beach County is a non-federal sponsor and supports the construction of the projects in Palm Beach County.

Due to the current Administration's commitment to reduce the Federal budget, no new construction starts for shore protection projects or studies are budgeted except as indicated below. Projects will be left to local and state governments to address. The report indicates that the Army Corps of Engineers (ACOE), are phasing out their role in shore protection and beach erosion control.

In accordance with the study and discussion with the Army Corps Of Engineers the status of the projects in Palm Beach County are as follows:

1) Lake Worth Inlet is for the construction of a new fixed sand transfer for shore damage mitigation; length: 0.76 miles. The study supports the recommendation that the ACOE should participate in the project (new project).

- 2) South Lake Worth Inlet is for the construction, operation and maintenance of a new Sand Transfer Plant, length: .57 miles. The study supports the recommendation that the ACOE should participate in the project (new project).
- 3) Jupiter/Carlin Park is an authorized beach renourishment project, length: 1.1 miles. The ACOE will continue its support until the contract expires in 2005 (existing).
- 4) Juno/Ocean Cay is an authorized beach renourishment project; length: 2.75 miles It is not constructed and is not recommended for ACOE participation (new project).
- 5) North-end Palm Beach Island is an authorized beach nourishment project, length: 1.95 miles. It is not constructed and is not recommended for ACOE participation (new project).
- 6) Palm Beach Island is an authorized beach nourishment project, length: 3.1 miles. It is not constructed and is not recommended for ACOE participation (new project).
- 7) South-end Palm Beach Island is an authorized beach nourishment project, length 3.25 miles. It is not constructed and is not recommended for ACOE participation. (new project).
- 8) Ocean Ridge is an authorized beach restoration and periodic nourishment project. It is scheduled for construction by Palm Beach County during 1996; length: 1.46 miles (existing).
- 9) Delray Beach is an authorized renourishment project; length 2.65 miles. It has a 50 year commitment which started in 1973 and lasts until 2023 (existing).
- 10) **Highland Beach** is a modification to the authorized 1962 periodic nourishment project; length: 3.2 miles. It is not constructed and is not recommended for ACOE participation (new project).
- 11) Boca Raton is an authorized beach restoration and periodic nourishment project; length: 1.45 miles. It is limited to 10 year federal participation which expires in 1998 (existing).

Draft Environmental Impact Statement

Based on The Draft Environmental Impact Statement the permanent sand transfer plants proposed for Lake Worth and South Lake Worth inlets are among the combined alternatives needed for overall beach restoration. The report indicates that most impacts from the alternative measures would be short-term and that sea turtle nesting would benefit from nourishment activities. The draft also suggests that no-action alternative would allow beach erosion to continue, further decreasing available nesting habitat and recreational beach acreage in Region III. Storm damages in excess of \$33 million would be realized over that which would be expected under the proposed combination of alternatives.

Conclusion

To comply with the Administrative directive: 1) Lake Worth Sand Transfer Plant; and 2) South Lake Worth Sand Transfer Plant including Palm Beach Harbor sand transfer system at Lake Worth Inlet are the **new** projects recommended for Palm Beach County

(see maps). These projects provide a cost savings to the Federal Government in reducing required renourishment volumes for the lives of previously authorized projects; or mitigate for the adverse effects of the navigation project on the downdrift shoreline.

FUNDING AGENCY: No fun

No funding is requested

PROJECT COST:

No funding is requested

RECOMMENDATION:

The study is consistent with Council's SRPP Regional Goal 6.4, Policies 6.4.1.5 and 6.4.1.6 and 6.4.1.7 which support restoration measures compatible with approved structures; utilize native vegetation for dune restoration, and implement long-term beach stability methods to maintain inlets with coordination and assistance of state,

federal and local governments.

AGENCIES CONTACTED:

Palm Beach County Administrator

Jupiter Administrator
Juno Administrator

Lake Worth Administrator
Palm Beach Administrator
Ocean Ridge Administrator
Delray Beach Administrator
Highland beach Administrator
Boca Raton Administrator

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August 22, 1996

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Ms. Bonnie B. Dearborn, Intergovernmental Coordinator Treasure Coast Regional Planning Council 3228 S.W. Martin Downs Boulevard, Suite 205 P.O. Box 1529

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Palm City, Florida 34990

Re: 96-PB-08-08 - Department of the Army - Draft Feasibility Report

Dear Ms. Dearborn:

This is in response to your request for comments on the Coast of Florida Erosion and Storm Effects Study, Region III - Feasibility Report. Only a portion of the report, through the section entitled "Formulation of Alternative Plans", was received, so our comments are limited to that portion.

In broad outline, the report appears consistent with the City's Comprehensive Plan direction to continue programs for coastal protection. However, it is inconsistent with Coastal Management Element Objective A-1, which calls for continuation of the City's established and ongoing programs for beach erosion control and dune protection.

The inconsistency lies in the proposed reduction in the Federal participation in the project through a re-analysis of the design parameters. The report proposes a new NED Project Summary indicating a design with a 20 foot wide berm at +9.0 feet NGVD, seven year renourishment interval, and renourishment volume of 155,300 cubic yards. (Note: there is a internal inconsistency in the report related to the design description - Item 160 on Page 69 indicates that the renourishment interval is ten years.) The General Design Memorandum for the project defines a design section with a 100 foot berm at +9.0 NGVD, nine year renourishment interval, and renourishment volume of 1,021,000 cubic yards. This design is referenced in the Local Cooperation Agreement (LCA) for the project, which is the vehicle through which the Federal Government participates in the project.

Ms. Bonnie B. Dearborn, Intergovernmental Coordinator 96-PB-08-08 - Department of the Army - Draft Feasibility Report Page 2

The City will further investigate the inconsistencies in the draft report directly with the Corps of Engineers. To help in this investigation, we request a complete copy of the draft report. At this time, our limited comments regarding the Delray Beach project can be summarized as follows:

- Re-analysis of the project design, and the resulting reduction in the design section, is inconsistent with the City's Comprehensive Plan, the approved project design, and existing agreements with the Federal Government.
- The proposed project design would reduce storm protection of upland public and private properties and infrastructure.
- The proposed project design would reduce protection, and threaten the existence of, sea turtle nesting habitat and the beach/dune ecosystem.
- The proposed reduction in Federal participation would threaten the economic viability of the beach erosion control project.

Thank you for the opportunity to comment on this item early in the process. Such early warning will allow us to appropriately react in a timely manner. Should you have any questions, please call me at (561) 243-7321.

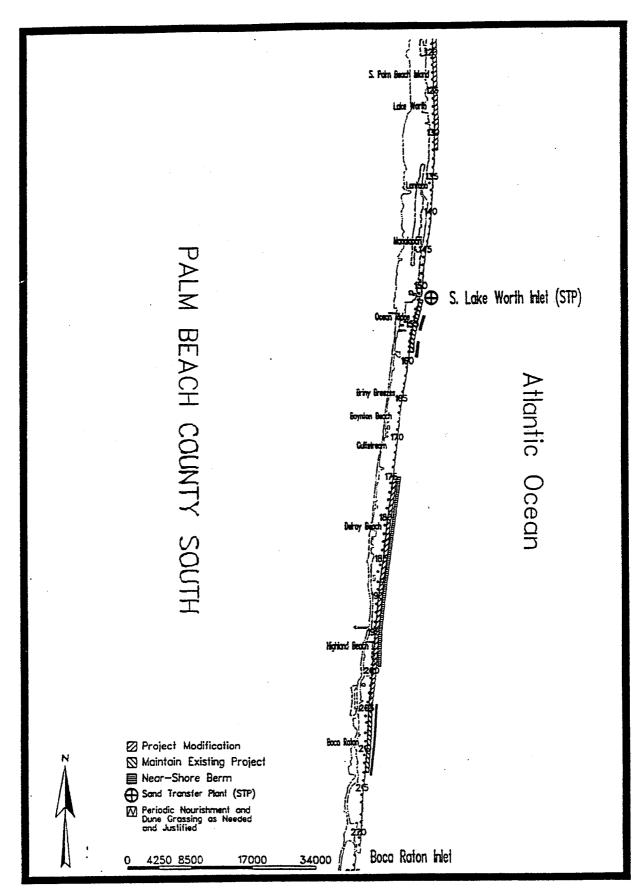
Sincerely,

John Walker

Project Coordinator

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Palm Beach Count Project Alternatives, South



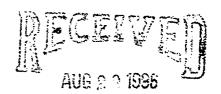


CITY HALL • 201 WEST PALMETTO PARK ROAD • BOCA RATON, FLORIDA 33432-3795 • PHONE: (407) 393-7700 SUNCOM: (407) 922-7700



August 26, 1996

Ms. Bonnie B. Dearborn Intergovernmental Coordinator Treasure Coast Regional Planning Council 3228 S.W. Martin Downs Boulevard Suite 205 P.O. Box 1529 Palm City, FL 34990



TO THE WOLLD WOLL

Re:

96-PB-088-Department of the Army - Draft Feasibility Report

Boca Rator. Shore Protection Project

Dear Ms. Dearborn:

Thank you for the opportunity to review the Boca Raton segment of the "Coast of Florida, Erosion and Storm Effects Study - Region III".

We offer the following comments related to the information presented for the Boca Raton project:

- NED Project Summary: The majority of the NED project summary sheet is 1. blank. With regards to the available information, the project length is not 1.65 miles, but is approximately 1.50 miles. The berm width extension (design berm width) of the constructed project is 50 feet, not 0 feet.
- 2. Page 69, Paragraph 162. Boca Rator: The berm width listed in this paragraph is 20 feet. The General Design Memorandum (GDM) for the project, which has been updated by the City and is presently under U.S. Army Corps of Engineers review, provides a 50 feet wide design berm. The 50 feet design berm width is also contained in the Local Cooperative Agreement (LCA) for the project. The initial design fill was 406,000 cubic yards with an advanced nourishment volume for an 8 year renourishment interval of approximately 564,000 cubic yards of material. The proposed first renourishment of the project is planned for 1997 with an approximate 600,000 cubic yard fill placement, most of which will be advanced nourishment material.

Under authority of the authorizing design document for Palm Beach County and, more recently, by virtue of Section 206 of the 1992 Water Resources Development Act, the City provides the engineering and construction supervision for the project and receives federal funding on a reimbursable basis. As a result, we can provide the appropriate information related to the design details for our project for the Coast of Florida - Erosion and Storm Effects Study. If this is not possible, we request the opportunity to review and comment on the information for the Boca Raton project when it is available, prior to the finalization of this report.

Ms. Bonnie B. Dearborn August 26, 1996 Page 2

Thank you for providing the Study for our review and comments. Please advise us if we can supply the appropriate information for our project, or review the missing information when it becomes available in the draft document.

Sincerely,

Ronald G. Laccheo

Municipal Services Director

c: D. Dreska

R. DiChristopher

R. Spadoni

MS/RGL/sb/960811



August 27, 1996

Mr. A.J. Salem
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

RE: SFRPC #96-0801, SAI# FL9608020623C, Review of the Draft Feasibility Report and Environmental Impact Statement (DEIS) for the Coast of Florida Erosion and Storm Effects Study, Region III (Palm Beach, Broward and Dade County), U.S. Army Corps of Engineers.

Dear Mr. Salem:

We have reviewed the above-referenced feasibility report/EIS and have the following comments:

- The project methodology and design, as proposed is generally consistent with the goals and
 policies of the Strategic Regional Policy Plan for South Florida (SRPP). Council staff supports the
 implementation of beach renourishment projects for the purposes of providing storm protection
 for upland property, restoring dunes and maintaining eroding beaches.
- The beaches and dune systems are of regional significance in the SRPP. Staff supports the use of buffer zones to protect these important resources. Sand movement and downdrift erosion should be monitored on a region wide basis to ensure the livelihood of wildlife habitats and the stability of renourished areas. All actions should be consistent with the goals and policies of the appropriate county comprehensive plans.
- Staff recommends that, if the proposed actions are implemented, 1) impacts to the natural systems be minimized to the greatest extent feasible and 2) the permit grantor determine the extent of sensitive marine life and vegetative communities in the vicinity of each project and require protection and or mitigation of disturbed habitat. These guidelines will assist in reducing the cumulative impacts to native plants and animals, wetlands and deep water habitat and fisheries that the goals and policies of the Strategic Regional Policy Plan for South Florida seek to protect.
- The goals and policies of the Strategic Regional Policy Plan for South Florida, in particular those
 indicated below, should be observed when making decisions regarding this project.

Strategic Regional Goal

3.1 Eliminate the inappropriate uses of land by improving the land use designations and utilize land acquisition where necessary so that the quality and connectedness of Natural Resources of Regional Significance and suitable high quality natural areas is improved.

SEP 17 1996 3440 Hollywood Boulevard, Suite 140, Hollywood, Florida 33021 Broward (954) 985-4416, Area Codes 305 and 561 (800) 985-4416 Florida CoassainCom 473-4416, FAX (954) 985-4417, SunCom FAX 473-4417 Management Program e-mail sfadmin@sfrpc.com Regional Policies

- 3.1.1 Natural Resources of Regional Significance and other suitable natural resources shall be preserved and protected. Mitigation for unavoidable impacts will be provided either on-site or in identified regional habitat mitigation areas with the goal of providing the highest level of resource value and function for the regional system. Endangered faunal species habitat and populations documented on-site shall be preserved on-site. Threatened faunal species and populations and species of special concern documented on-site, as well as critically imperiled, imperiled and rare plants shall be preserved on-site unless it is demonstrated that off-site mitigation will not adversely impact the viability or number of individuals of the species.
- 3.1.2 Direct inappropriate uses of land that are not consistent with the protection and maintenance of natural resource values away from Natural Resources of Regional Significance and suitable natural resource areas.
- 3.1.9 Degradation or destruction of Natural Resources of Regional Significance, including listed species and their habitats will occur as a result of a proposed project only if:
 - a) the activity is necessary to prevent or eliminate a public hazard, and
 - b) the activity is in the public interest and no other alternative exists, and
 - c) the activity does not destroy significant natural habitat, or identified natural resource values, and
 - d) the activity does not destroy habitat for threatened or endangered species, and
 - e) the activity does not negatively impact listed species that have been documented to use or rely upon the site.
- 3.1.10 Proposed projects shall include buffer zones between development and existing Natural Resources of Regional Significance and other suitable natural resources. The buffer zones shall provide natural habitat values and functions that compliment Natural Resources of Regional Significance values so that the natural system values of the site are not negatively impacted by adjacent uses. The buffer zones shall be a minimum of 25 feet in width. Alternative widths may be proposed if it is demonstrated that the alternative furthers the viability of the Natural Resource of Regional Significance, effectively separating the development impacts from the natural resource or contributing to reduced fragmentation of identified Natural Resources of Regional Significance.
- 3.1.11 Implement monitoring and maintenance of Natural Resources of Regional Significance and other suitable natural resources so that an Overall Positive Gain in quality and quantity of the Natural Resources of Regional Significance is achieved. The monitoring of the Natural Resources of Regional Significance shall be included on all projects that have not been demonstrated to not adversely impact the resource or associated listed species.
- 3.1.19 Uses of the land shall be consistent with the sustained ecological functioning of the Natural Resources of Regional Significance and suitable adjacent natural buffer areas and will be based upon the radius required to provide protection to the natural system and associated inhabitants. The radius will vary in size depending upon the resource or species that is to be protected.

Strategic Regional Goal

3.4 Improve the protection of upland habitat areas and maximize the interrelationships between the wetland and upland components of the natural system.

Regional Policies

- 3.4.1 Require the utilization of vegetation and wildlife surveys in project review which include the identification of listed species habitat quantity and quality.
- 3.4.2 Utilize the results of the vegetation, wildlife and listed species habitat surveys in the reduction of project related impacts to identified wildlife populations or communities. The results of the surveys will be utilized to ensure that the proposed project is compatible with identified or otherwise documented on-site viable populations or communities by retaining those populations or communities on-site.
- 3.4.4 Require the use of ecological studies and site and species specific surveys in projects that may impact natural habitat areas to ensure that rare and state and federally listed plants and wildlife are identified with respect to temporal and spatial distribution.
- 3.4.5 Identify and protect the habitats of rare and state and federally listed species. For those rare and threatened species that have been scientifically demonstrated by past or site specific studies to be relocated successfully, without resulting in harm to the relocated or receiving populations, and where *in-situ* preservation is neither possible nor desirable from an ecological perspective, identify suitable receptor sites, guaranteed to be preserved and managed in perpetuity for the protection of the relocated species that will be utilized for the relocation of such rare or listed plants and animals made necessary by unavoidable project impacts. Consistent use of the site by endangered species, or documented endangered species habitat on-site shall be preserved on-site.
- 3.4.8 Remove invasive exotics from all Natural Resources of Regional Significance and associated buffer areas. Require the continued regular and periodic maintenance of areas that have had invasive exotics removed.
- 3.4.9 Required maintenance shall insure that re-establishment of the invasive exotic does not occur.

Strategic Regional Goal

3.5 Develop a plan for public access that delineates the Natural Resources of Regional Significance and high quality natural areas compatible with human recreation and promotes the ecologically sensitive use of suitable Natural Resources of Regional

Regional Policies

3.5.1 Identify the elements of each Natural Resource of Regional Significance and other suitable natural resources of the region and implement protection, restoration, and management of these elements that encourages public use. This shall include the identification of suitable additional beach access areas that allow for effective public transportation and private vehicle parking. Such needs shall be addressed by the incorporation of shared use parking areas and public transportation pick-up and drop-off points.

Strategic Regional Goal

3.8 Enhance and preserve natural system values of South Florida's shorelines, estuaries, benthic communities, fisheries, and associated habitats, including but not limited to, Florida Bay, Biscayne Bay and the coral reef tract.

Regional Policies

- 3.8.1 Enhance and preserve natural shoreline characteristics through requirements resulting from the review of proposed projects and in the implementation of ICE, including but not limited to, mangroves, beaches and dunes through prohibition of structural shoreline stabilization methods except to protect existing navigation channels, maintain reasonable riparian access, or allow an activity in the public interest as determined by applicable state and federal permitting criteria.
- 3.8.2 Enhance and preserve benthic communities, including but not limited to seagrass and shellfish beds, and coral habitats, by allowing only that dredge and fill activity, artificial shading of habitat areas, or destruction from boats that is the least amount practicable, and by encouraging permanent mooring facilities. Dredge and fill activities may occur on submerged lands in the Florida Keys only as permitted by the Monroe County Land Development Regulations. It must be demonstrated pursuant to the review of the proposed project features that the activities included in the proposed project do not cause permanent, adverse natural system impacts.
- 3.8.3 As a result of proposed project reviews, include conditions that result in a project that enhances and preserves marine and estuarine water quality by:
 - a) improving the timing and quality of freshwater inflows;
 - reducing turbidity, nutrient loading and bacterial loading from wastewater facilities and vessels;
 - c) reducing the number of improperly maintained stormwater systems; and
 - d) requiring port facilities and marinas to implement hazardous materials spill plans.
- 3.8.4 Enhance and preserve commercial and sports fisheries through monitoring, research, best management practices for fish harvesting and protection of nursery habitat and include the resulting information in educational programs throughout the region. Identified nursery habitat shall be protected through the inclusion of suitable habitat protective features including, but not limited to:
 - a) avoidance of project impacts within habitat area;
 - b) replacement of habitat area impacted by proposed project; or
 - c) improvement of remaining habitat area within remainder of proposed project area.
- 3.8.5 Enhance and preserve habitat for endangered and threatened marine species by the preservation of identified endangered species habitat and populations. For threatened species or species of critical concern, on-site preservation will be required unless it is demonstrated that off-site mitigation will not adversely impact the viability or number of individuals of the species.

Mr. A.J. Salem August 27, 1996 Page 5

Thank you for the opportunity to comment. We would appreciate being kept informed on the progress of this project. Please do not hesitate to call if you have any questions or comments.

Sincerely,

Eric Silva Council Staff

ES/cp

cc: Ralph Cantral, FCMP Michael Wanchick, Broward County Guillermo E. Olmedillo, Dade County Michael Busha, TCRPC

RESPONSE TO COMMENTS FROM THE FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS (STATE CLEARINGHOUSE), LETTER DATED OCTOBER 11, 1986.

1. <u>Paragraph 2</u>. "The DEP suggests that separate Supplemental Environmental Impact Statements be prepared to accompany the General Design Memorandum for each of the projects contained in the draft EIS and to include: ..."

Response: The feasibility report and EIS are recommending only three project segments for Federal participation. The recommended project segments are the Lake Worth Inlet sand transfer plant (STP), the South Lake Worth Inlet STP and beach nourishment along 0.6 miles of shoreline at Dania. The remaining project segments discussed in sections 2.4 through 2.4.3.5 of the DEIS are not recommended for authorization at this time. The Corps does not anticipate that the construction of the STPs, sand bypassing or beach nourishment at Dania would significantly affect fish and wildlife resources. To ensure that impacts are minimized, additional environmental studies would be conducted and the adequate level of supplemental NEPA documentation would be prepared during planning, engineering and design phase for each of the recommended project segments authorized. The same would apply to any of the other project segments if they are considered in the future. The Department of Environmental Protection recommendations would be considered in any supplemental NEPA document prepared.

2. <u>Paragraph 3</u>. City of Boca Raton Comment (refer to paragraph 2. in the letter from the City of Boca Raton dated August 26, 1996, enclosed with the State Clearinghouse letter). "<u>Page 69 Paragraph 162</u>. Boca Raton: The berm width listed in this paragraph is 20 feet."

Response: This paragraph is a description from the "Intermediate Assessment of Alternatives" section. As described in the "Detailed Alternative Plans" (Paragraph 198) and "Recommended Plan" (Paragraph 266) sections of the feasibility report, no additional berm width extension, beyond the presently authorized project has been identified in the assessment of the NED Plan. The zero berm width in the summary table means that the report does not recommend modification of the Boca Raton project segment at this time. The berm width in the COF report (20 feet) is different that the berm width (50 feet) in the GDM under preparation by the City of Boca Raton. The GDM reflects data (surveys, real estate appraisal) not available to the COF study. The COF report is based on 1990 survey data and real estate information. Since the GDM will be the document used for renourishment, the GDM will serve as the basis for approval of the design berm. The only NED project modifications identified for Boca Raton, beyond the presently authorized project, includes extension of Federal participation from 10 years from completion of construction to 50 years from the start of construction and a nearshore berm site as an alternative maintenance dredged material disposal site.

3. <u>Paragraph 3</u>. Comment from the City of Delray Beach (refer to letter dated August 22, 1996, enclose with the State Clearinghouse letter). "The inconsistency lies in the proposed reduction in the Federal participation in the project"

Response: This is a misunderstanding. As identified in the City's letter, only a portion of the report was reviewed, through the section entitled "Formulation of Alternative Plans." The

"Detailed Alternative Plan" (Paragraph 196) and the "Recommended Plan" (Paragraph 264) for the Delray project segment is recommended for modification with a 20 feet berm width extension.

The 1987 GDM for Palm Beach County describes the NED plan for Delray Beach as continued periodic nourishment of the constructed project. The constructed project extended MHW by 100 feet, as authorized. The 1992 GDM prepared for the 3rd periodic nourishment does describe the project as a 100-foot extension of the berm, but this description is in error. The authorized project calls for extending the mean high water 100 feet. Except for the 1992 GDM, all of the study and design documents for this project reflect a 100-foot extension of the MHW. The 20-foot extension of the berm will result in a slightly larger beach than the project that results from extension of the MHW by 100 feet.

The 1987 GDM called for an 8-year nourishment interval. The 1992 GDM reported the periodic nourishment interval at 9 years. This feasibility report indicates that the renourishment interval should be 7 years. The periodic nourishment interval is dependent on volume and dredging cost estimates. This number will varying between 6 and 10 years at this site due to the conditions and price levels at the time of the nourishment.

Also, although the project component is a considerable distance from either inlet, an extensive nearshore berm site offshore of this project component is also recommended as a potential dredged material disposal site, for future consideration.

3. <u>Paragraph 5</u>. "Based on the information contained in the draft feasibility report, draft EIS and the enclosed comments provided by our reviewing agencies, the state has determined that, at this stage, the above referenced project is consistent with the Florida Coastal Zone Management Program (FCZMP)."

Reponse: Acknowledged.

Beaches and Nearshore Habitats I to it is a triangle.

A joint program of the American Littoral Society and Coastal Research & Education

October 10, 1996

American Littoral Society 2809 Bird Avenue - Suite 162 Miami, FL 33133

Colonel Terry L. Rice, District Engineer Jacksonville District U.S. Army Corps of Engineers P.O. Box 4970 Jacksonville, FL 32232

re: Draft Feasibility Report for Coast of Florida Erosion and Storm Effects Study (Region III)

Dear sir:

This letter is in response to the request for public comments on the Draft Feasibility Report for the Coast of Florida Erosion and Storm Effects Study (Region III).

The Beaches and Nearshore Habitats Initiative is a joint effort of the American Littoral Society, Inc. and of Coastal Research & Education, Inc -- both Florida non-profit organizations whose mission and memberships give them standing in any matter regarding beach management in the State of Florida. The American Littoral Society is a non-profit membership organization dedicated to the conservation of marine life and habitat throughout the coastal zone. Coastal Research & Education is a non-profit service organization dedicated to the initiation of innovative and results-oriented research and education programs which optimize the management of critical coastal resources. The Beaches and Nearshore Habitats Initiative is dedicated to the achievement of environmentally sound management and restoration of Florida's beaches while preserving the state's fragile nearshore marine habitats from dredging and sedimentation burial.

Based on the above considerations, we have found several specific items in the Draft Feasibility Report that would materially improve environmental safeguards to nearshore habitats, and several other items which require revision in order to be fully aligned with environmentally sound beach management criteria.

We strongly agree with the concept of considering together the three counties of Dade, Broward and Palm Beach for beach renourishment planning purposes, since this much more realistically applies ecosystem management perspectives to how natural processes work to affect beaches across these three counties.

The proposed incorporation of 400-foot no-dredge buffer zones around hardbottom habitats in the vicinity of borrow areas is a major improvement over the current unofficial "standard" of 200-foot buffer zones. However, we have long advocated 600-foot buffer zones based on the existing record of reef-damaging dredging accidents that have ocurred in spite of the aforementioned 200-foot buffer zones, and we restate our request for incorporation of 600-foot no-dredge buffer zones around hardbottom habitats in the vicinity of sand dredging operations.

The Draft Feasibility Report concludes that as many as 31 acres of nearshore hardbottom in Palm Beach County, 25 acres in Broward County, and 5 acres in Dade County will be buried outright as a result of beach renourishment actions. Although the Draft Feasibility Report (DFR) refers to plans for mitigating this "unavoidable" damage to nearshore hardbottom habitats impacted by the actual construction of beaches, no specifics are given for that mitigation. We ask that there be a minimum 2-to-1 mitigation ratio for buried or otherwise impacted nearshore hardbottom. The DFR indicates that any lost or destroyed nearshore hardbottom will be replaced by "artificial reefs, boulders of concrete or any other artificial technology". We ask that the mitigation consist of constructing coquina boulder artificial reefs as close as possible to the original location of the impacted hardbottoms.

We strongly agree with the concept of mitigation, but we strongly recommend the further use of preventive strategies — such as no-dredge buffer zones and inlet sand bypassing — to limit reef destruction without having to go into mitigation. In that regard, we endorse the DFR's plans for implementing inlet sand bypassing at Lake Worth Inlet and South Lake Worth Inlet — but we also ask for a more aggressive application of that strategy to the rest of the inlets in the Region.

Although, as stated, the DFR proposes strategy changes that will enhance safeguards for nearshore hardbottoms and offshore reefs, we still maintain that the Draft Feasibility Report is still deficient in its consideration and application of the following strategic concepts:

- (1) The importance of increasing no-dredge buffer zones to ensure protection of coral reefs from excess sedimentation, siltation, burial and physical damage from sand mining and placement operations.
- (2) The importance and cost effectiveness of applying inlet sand bypassing at all 8 inlets found within Region III, in order to reduce nearshore hardbottom burial, rescue scarce beach quality sand that would otherwise be lost to the littoral system, and help reduce the costs associated with renourishment projects.
- (3) The need to include in the DFR's Environmental Impact Statement a formal risk analysis of expectable impacts to offshore reefs, which is totally lacking now in the DFR.
- (4) The need to fully assess the possible impacts of nearshore sand berms upon nearby hardbottoms.
- (5) The need to develop renourishment schedules that fully protect federally

- listed endangered and threatened turtle species by timing renourishment operations so that they avoid the known summer turtle nesting season.
- (6) The importance of requiring detailed mapping of all seagrass beds, nearshore hardbottom habitats and offshore reefs in the vicinity of a beach renourishment project before final project permitting and operations.

Finally, but most importantly, we must insist on specific assurances that the development of this DFR and its Environmental Impact Statement will not result in the waiving of Environmental Assessment requirements for each specific project included in the DFR. The DFR deals with environmental considerations only in general terms, and it will be essential that each project provide a more specific environmental assessment in order for that project to be in compliance with National Environmental Procedures Act (NEPA) requirements.

Importance of 600-foot No-Dredge Buffer Zones

We request an increase in the no-dredge buffer zones to 600 feet to ensure that offshore reefs near dredging operations will not be destroyed again by dredging accidents.

To fully evaluate the importance of preventing destruction of coral colonies, we must take into account that stony corals are — in human terms — a non-renewable resource, and have been classified as such by the South Atlantic Fishery Management Council and the Caribbean Fishery Management Council (SAFMC,1995). The reason for classifying corals as non-renewable is their slow rate of growth. For example, it may take from 80 to 250 years for a single colony of star coral (siderastrea) to reach a size of 1 meter, and from 400 to 1250 years to reach 5 meters (McConnaughey, 1983). Coral growth is therefore more appropriately measured on a geologic time scale, rather than a biological one.

A knee-high coral could be hundreds of years old. If it is destroyed by a dredging accident or if it is buried by silt from the dredging, that coral will not be replaced for hundreds of years. In terms of human lifetimes, that makes corals a non-renewable resource. And that is why it is so important to increase buffer zones around coral reefs which could be impacted by dredging operations.

To fully evaluate our request, we must also keep in mind that dredging accidents around coral reefs happen with alarming frequency.

In a 1988 example, two acres of natural coral reef were damaged or destroyed by a dredge during the rebuilding of Miami's Sunny Isles Beach. The damage was depicted as some of the severest reef destruction in modern Southern Florida history. Even though buffer zones were set at 200 feet to the nearest coral reefs, the dredgers strayed off course and plowed 150 feet into coral habitat without the dredge operators ever becoming aware of it. A 600 foot buffer zone would greatly reduce the chances of something like this ever happening again.

Using past accidents as experience for the future, we strongly request that a minimum 600 foot buffer zone be used to keep dredging operations away from coral habitats and that deployment of lighted buoys marking the buffer zone be required. Only such requirements

can prevent future damage to regional coral habitat during dredging operations. If we can increase buffer zones then we can save acres of reefs without having to go into mitigation.

Importance of Regionwide Inlet Sand Bypassing

The second request we are making is for the use of inlet sand bypassing at all inlets in Region III, except for Government Cut. The Coast of Florida Erosion and Storm Effects Study only mentions the implementation of sand bypassing at two inlets, Lake Worth Inlet and South Lake Worth Inlet. But Region III includes seven inlets where sand bypassing could be used as a partial offset to dredge-and-dump beach renourishment projects.

Inlet sand bypassing should not be considered just as a lower-tier alternative to beach renourishment. Instead, wherever possible, it should be used as the standard starting point for beach erosion control of downdrift beaches, with beach renourishment as a supplement to the inlet sand bypassing.

Many examples exist of the proven benefits of inlet sand bypassing. At Ponce de Leon Inlet, bypassing sand from the inlet and placing it on the beach north of the inlet appears to stabilize the navigation channel and retard erosion north of the inlet (Jones, 1980). At Jupiter Inlet, the bypassing operation has been partially successful in reducing beach erosion and ensuring adequate navigation depths through the inlet (ibid.). Examples of successful inlet bypassing practices have also been documented at Sebastian Inlet, Lake Worth Inlet, Boca Raton Inlet and Hillsboro Inlet.

At specific sites, inlet sand bypassing could prove crucial to protecting nearshore hardbottom habitats. The proposed DFR estimates that 31, 25, and 5 acres of nearshore hardbottom in Palm Beach, Broward, and Dade Counties, respectively, would be destroyed as a result of renourishment projects. The use of inlet sand bypassing systems could reduce the burial of nearshore habitats across these three counties.

Inlet sand bypassing would reduce the magnitude of beach renourishment projects, which are designed to widen out beaches to compensate for 6-to10-year erosion cycles. Since inlet sand bypassing would be providing salvaged sand to the inlet's downdrift beach on a continuous basis, this would significantly reduce the amount of sand needed to be deposited nearshore during each beach renourishment cycle. The resulting reduction in the width of the beach renourishment project would reduce the amount of nearshore hardbottom buried by the project.

Not only will inlet bypassing operations help coral reefs but they will also, once operating, reduce the cost of beach management. In a 1988 study of sand bypassing alternatives for the Port Everglades Inlet, results showed that inlet bypassing would save money in comparison to only utilizing beach renourishment to maintain the downdrift beach at John U. Lloyd State Recreation Area (Coastal Technology Corporation, 1988).

In Palm Beach County, 4 inlets with inlet bypassing potential are found: (1) Jupiter Inlet, (2) Lake Worth Inlet, (3) South Lake Worth (Boyton) Inlet, and (4) Boca Raton Inlet. Broward County contains a total of 2 usable inlets: (1) Hillsboro Inlet, and (2) Port Everglades

Inlet. Dade County also has one inlet (Bakers Haulover) where sand bypassing should be considered.

Table 2.1 in the DFR, titled "Presently Proposed Combination of Alternatives: Palm Beach County, Broward County and Dade County" mentions but does not indicate any use of inlet sand bypassing for any of the listed beaches. We request specific clarification on why only 2 of the above-mentioned 7 inlets have been proposed for inlet sand bypassing implementation or supported continuation.

We cannot understand why the DFR has discounted the implementation of sand bypassing at some of these inlets, and most particularly at Broward and Dade County inlets. The use of sand bypassing at most of these inlets would help reduce overall costs of downdrfit beach renourishment projects. It would save extremely scarce beach quality offshore sand resources for use on other beaches. And it would spare countless acres of nearshore hardbottom from sedimentation and burial by making it possible for beach renourishment projects downdrift of inlets to be scaled down thanks to the steady stream of sand that would be contributed to those beaches by the inlet sand bypassing.

We request the utilization or continuation of inlet sand bypassing systems at these specific sites:

- (1) Jupiter Inlet: to supply sand to Ocean Cay/Juno Beach
- (2) Lake Worth Inlet: to supply sand to North-End Palm Beach
- (3) South Lake Worth Inlet: to supply sand to Ocean Ridge
- (4) Boca Raton Inlet: to supply sand to Deerfield Beach, with Boca Raton acting as a feeder beach
- (5) Hillsboro Inlet: to supply sand to Pompano Beach/Lauderdale by the Sea
- (6) Port Everglades Inlet: to supply sand to John U. Lloyd Beach
- (7) Bakers Haulover Inlet: to provide sand to Bal Harbour

Offshore Reef Impacts Need Formal Risk Analysis

Our third request is for incorporation in the DFR of formal risk analysis regarding impacts to coral reefs near proposed dredging operations.

Under NEPA, Environmental Impact Statements produced by other federal agencies such as the Minerals Management Service (MMS, 1994) provide specific and detailed narrative and chart analysis of the probability of impacts and the expected severity of impacts to nearby coral reefs and other significant benthic habitats. The Army Corps of Engineers should do the same in this DFR, providing a clear, documented, and understandable ranking of impact probabilities and severities for various action alternatives considered in the DFR.

For an official environmental impact statement such as is incorporated in the DFR, general and vague declarations are insufficient and unacceptable. The DFR discounts the risk that offshore reefs face from dredging operations without presenting any justification for the discounting. The DFR categorizes mechanical damage to the reefs as unlikely, without presenting any analysis to support that conclusion. Given that very similar operations have repeatedly in the past resulted in significant and even catastrophic damage to coral reef